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10/038,365	01/03/2002	Genevieve Bell	42390P13661	6983

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EXAMINER

GAGLIOSTRO, KEVIN M

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 11/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/038,365	BELL ET AL.	
	Examiner	Art Unit	
	Kevin M. Gagliostro	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/3/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/3/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "the metadata" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 26 recites the limitation "the metadata" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for rejections under this section made in this office action:

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-27 and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,499,294 to Friedman.

Friedman clearly shows all the limitations recited in claim 1. See all of the paragraphs cited within the specification. Referring to claim 1, Friedman describes a digital camera comprising a memory to store image data of a captured image representing a scene in the physical world (column 3, lines 64-66) and an encryption module configured to digitally sign the image data prior to storage using a private key of an asymmetric key pair (column 5, lines 49-65).

Friedman clearly shows all the limitations recited in claim 2. See all of the paragraphs cited within the specification. Referring to claim 2, Friedman describes the digital camera of claim 1 wherein the encryption module is configured to obtain metadata associated with the image data and to digitally sign the image data and the metadata (column 5, lines 49-65).

Art Unit: 2615

Note: It is commonly known in the art that metadata simply means data about data that includes information describing aspects of actual data items, such as name, format, content, and the control of or over data.

Friedman clearly shows all the limitations recited in claim 3. See all of the paragraphs cited within the specification. Referring to claim 3, Friedman describes the digital camera of claim 1 wherein the metadata comprises at least one of date and time the image was captured (column 4, line 59), focal distance (column 4, lines 61-61), white levels (column 4, line 59), f-stop (column 4, line 59), brightness compensation (column 4, line 59), distance for auto-focus (column 4, lines 61-63), and digital signature of the image data (column 4, lines 63-66), when the image was captured (once again data and time) (column 4, line 59). Friedman further describes the use of a public key, taken from the image border or name plate, as a serial number for identifying the camera for such purposes as warranty repair or replacement. The public key is in fact mathematically related to the camera's private key (column 6, lines 14-21). So, the public key can be used as a means of identifying either the owner or photographer of the camera owner since every camera and it's owner has it's own unique means of identifying itself from any other camera.

Friedman clearly shows all the limitations recited in claim 4. See all of the paragraphs cited within the specification. Referring to claim 4, Friedman describes the digital camera of claim 1 wherein the camera further comprises a global positioning system (GPS) detector configured to determine a geographic location of the digital camera and wherein the metadata comprises the geographic location of the camera when the image was captured (column 4, line 60).

Friedman clearly shows all the limitations recited in claim 5. See all of the paragraphs cited within the specification. Referring to claim 5, Friedman describes the digital camera of claim 1 wherein the private key is uniquely associated with the digital camera (abstract).

Friedman clearly shows all the limitations recited in claim 6. See all of the paragraphs cited within the specification. Referring to claim 6, Friedman describes the digital camera of claim 1 wherein the private key is uniquely associated with a manufacturer of the digital camera (column 4, lines 38-40).

Friedman clearly shows all the limitations recited in claim 7. See all of the paragraphs cited within the specification. Referring to claim 7, Friedman describes the digital camera of claim 1 wherein the private key is uniquely associated with an owner of the digital camera. This is true the public key is in fact mathematically related to the camera's private key (column 6, lines 14-21). So, the public key can be used as a means of identifying the owner of the camera since every camera and it's owner has it's own unique means of identifying itself from any other camera.

Art Unit: 2615

Friedman clearly shows all the limitations recited in claim 8. See all of the paragraphs cited within the specification. Referring to claim 8, Friedman describes the digital camera of claim 1 wherein the encryption module is tamper-resistant (column 10, lines 37-44).

Friedman clearly shows all the limitations recited in claim 9. See figure 3 and 4 and all of the paragraphs cited within the specification. Referring to claim 9, Friedman describes a digital photography subsystem comprising a decryption module (figure 3c, item 20) to accept image data and metadata from a digital camera, the metadata including a digital signature of the image data, and to verify the digital signature of the image data to determine authenticity of an image represented by the image data (column 6, line 2-7). Friedman further describes a viewer module (or display) to show the image when the decryption module indicates the image data is authentic (figure 4).

Friedman clearly shows all the limitations recited in claim 10. See all of the paragraphs cited within the specification. Referring to claim 10, Friedman describes the digital photography subsystem of claim 9 wherein the decryption module is further configured to examine the metadata to determine authenticity of the image data (column 6, lines 24-27).

Friedman clearly shows all the limitations recited in claim 11. See all of the paragraphs cited within the specification. Referring to claim 11, Friedman describes the digital photography system of claim 10 wherein the metadata comprises at least one of date and time the image was captured (column 4, line 59), focal distance (column 4, lines 61-61), white levels (column 4, line 59), f-stop (column 4, line 59), brightness compensation (column 4, line 59), distance for auto-focus (column 4, lines 61-63), and digital signature of the image data (column 4, lines 63-66), when the image was captured (once again data and time) (column 4, line 59). Friedman further describes the use of a public key, taken from the image border or name plate, as a serial number for identifying the camera for such purposes as warranty repair or replacement. The public key is in fact mathematically related to the camera's private key (column 6, lines 14-21). So, the public key can be used as a means of identifying either the owner or photography of the camera owner since every camera and it's owner has it's own unique means of identifying itself from any other camera.

Friedman clearly shows all the limitations recited in claim 12. See all of the paragraphs cited within the specification. Referring to claim 12, Friedman describes the digital photography system of claim 11 wherein the metadata comprises a geographic location of the digital camera when the image was captured and the decryption module is configured to examine the geographic location when determining authenticity of the image (column 4, lines 66-67) and (column 5, lines 1-4).

Friedman clearly shows all the limitations recited in claim 13. See figure 4 and all of the paragraphs cited within the specification. Referring to claim 13, Friedman describes the digital photography system of claim 11 wherein the viewer module is configured to display the metadata in addition to the image data (column 9, lines 8-28) and (figure 4).

Friedman clearly shows all of the limitations recited in claim 14. See figure 4 and all of the paragraphs cited within the specification. Referring to claim 14, Friedman describes the digital photography subsystem of claim 11 wherein the image data and metadata is associated with audit data indicating changes to the image data. Specifically, Friedman describes an authentication system where a comparator receives the image hash from a hash calculator and a secure image hash from a decryptor. If the two are similar then that concludes that the digital image in question is identical to the image originally produced. If anything has been altered, then the authenticity will be indicated as not affirmed in the authenticity output signal A (column 6, lines 31-52) and (figure 3C). This audit data signal is viewable in the viewer module (figure 4).

Friedman clearly shows all the limitations recited in claim 15. See all of the paragraphs cited within the specification. Referring to claim 15, Friedman describes a secure digital photography system comprising a digital camera including a memory to store image data of a captured image representing a scene in the physical world (column 3, lines 64-66) and an encryption module configured to digitally sign the image data prior to storage using a private key of an asymmetric key pair and to obtain metadata associated with the image data (column 5, lines 49-65). Friedman also describes a decryption module to accept image data and metadata from a digital camera, the metadata including a digital signature of the image data, and to verify the digital signature of the image data to determine authenticity of an image represented by the image data (column 6, line 2-7). Friedman further describes a viewer module (or display) to show the image when the decryption module indicates the image data is authentic (figure 4).

Friedman clearly shows all the limitations recited in claim 16. See all of the paragraphs cited within the specification. Referring to claim 16, Friedman describes the secure digital photography system of claim 15, wherein the metadata comprises at least one of date and time the image was captured (column 4, line 59), focal distance (column 4, lines 61-61), white levels (column 4, line 59), f-stop (column 4, line 59), brightness compensation (column 4, line 59), distance for auto-focus (column 4, lines 61-63), and digital signature of the image data (column 4, lines 63-66), when the image was captured (once again data and time) (column 4, line 59). Friedman further describes the use of a public key, taken from the image border or name plate, as a serial number for identifying the camera for such purposes as warranty repair or replacement. The public key is in fact mathematically related to

Art Unit: 2615

the camera's private key (column 6, lines 14-21). So, the public key can be used as a means of identifying either the owner or photography of the camera owner since every camera and it's owner has it's own unique means of identifying itself from any other camera.

Friedman clearly shows all the limitations recited in claim 17. See all of the paragraphs cited within the specification. Referring to claim 17, Friedman describes the secure digital photography system of claim 16, wherein the digital camera further comprises a global positioning system (GPS) detector configured to determine a geographic location of the digital camera and wherein the metadata comprises the geographic location of the camera when the image was captured (column 4, line 60).

Friedman clearly shows all the limitations recited in claim 18. See all of the paragraphs cited within the specification. Referring to claim 18, Friedman describes the secure digital photography system of claim 16, wherein the decryption module is further configured to examine the metadata to determine authenticity of the image data (column 6, lines 24-27).

Friedman clearly shows all the limitations recited in claim 19. See all of the paragraphs cited within the specification. Referring to claim 19, Friedman describes a method of generating photograph data comprises a digital camera including a memory to store image data of a captured image representing a scene in the physical world (column 3, lines 64-66) and an encryption module configured to digitally sign the image data prior to storage using a private key of an asymmetric key pair and to obtain metadata associated with the image data (column 5, lines 49-65).

Friedman clearly shows all the limitations recited in claim 20. See all of the paragraphs cited within the specification. Referring to claim 20, Friedman describes the method of claim 19 wherein the metadata comprises at least one of date and time the image was captured (column 4, line 59), focal distance (column 4, lines 61-61), white levels (column 4, line 59), f-stop (column 4, line 59), brightness compensation (column 4, line 59), distance for auto-focus (column 4, lines 61-63), and digital signature of the image data (column 4, lines 63-66), when the image was captured (once again data and time) (column 4, line 59). Friedman further describes the use of a public key, taken from the image border or name plate, as a serial number for identifying the camera for such purposes as warranty repair or replacement. The public key is in fact mathematically related to the camera's private key (column 6, lines 14-21). So, the public key can be used as a means of identifying either the owner or photography of the camera owner since every camera and it's owner has it's own unique means of identifying itself from any other camera.

Friedman clearly shows all the limitations recited in claim 21. See all of the paragraphs cited within the specification. Referring to claim 21, Friedman describes

Art Unit: 2615

the method of claim 20 further comprising digitally signing the metadata prior to storage (column 5, lines 49-65).

Friedman clearly shows all the limitations recited in claim 22. See all of the paragraphs cited within the specification. Referring to claim 22, Friedman describes the method of claim 20 further comprising determining a geographic location of the digital camera and wherein the metadata comprises the geographic location of the camera when the image was captured (column 4, lines 66-67) and (column 5, lines 1-4).

Friedman clearly shows all the limitations recited in claim 23. See all of the paragraphs cited within the specification. Referring to claim 23, Friedman describes the method of claim 19 wherein the private key is uniquely associated with the digital camera (abstract).

Friedman clearly shows all the limitations recited in claim 24. See all of the paragraphs cited within the specification. Referring to claim 24, Friedman describes the method of claim 19 wherein the private key is uniquely associated with the manufacturer of the digital camera (column 4, lines 38-40).

Friedman clearly shows all the limitations recited in claim 25. See all of the paragraphs cited within the specification. Referring to claim 25, Friedman describes the method of claim 19 wherein the private key is uniquely associated with an owner of the digital camera. This is true the public key is in fact mathematically related to the camera's private key (column 6, lines 14-21). So, the public key can be used as a means of identifying the owner of the camera since every camera and it's owner has it's own unique means of identifying itself from any other camera.

Friedman clearly shows all of the limitations recited in claim 26. See all of the paragraphs cited within the specification. Referring to claim 26, Friedman describes a method of generating and authenticating digital photographs comprising capturing image data representing an image in the physical world by a digital camera (column 3, lines 64-66). Friedman also describes obtaining metadata associated with the captured image, the metadata indicating characteristics of the image data (column 4, lines 55-66).

Note: It is commonly known in the art that metadata simply means data about data that includes information describing aspects of actual data items, such as name, format, content, and the control of or over data.

In continuing in the limitations of claim 26, Friedman also describes digitally signing the image data with a private key of an asymmetric key pair (column 5, lines 49-65) and transferring the image data, the digital signature, and the metadata to a host system (column 1, lines 4-45). Friedman further describes authenticating the image

Art Unit: 2615

data by the host system using the digital signature, a corresponding public key of the asymmetric key pair, and the metadata (column 6, lines 2-15).

Friedman clearly shows all of the limitations recited in claim 27. See all of the paragraphs cited within the specification. Referring to claim 27, Friedman describes the method of claim 26 wherein the metadata comprises at least one of date and time the image was captured (column 4, line 59), focal distance (column 4, lines 61-61), white levels (column 4, line 59), f-stop (column 4, line 59), brightness compensation (column 4, line 59), distance for auto-focus (column 4, lines 61-63), and digital signature of the image data (column 4, lines 63-66), when the image was captured (once again data and time) (column 4, line 59). Friedman further describes the use of a public key, taken from the image border or name plate, as a serial number for identifying the camera for such purposes as warranty repair or replacement. The public key is in fact mathematically related to the camera's private key (column 6, lines 14-21). So, the public key can be used as a means of identifying either the owner or photography of the camera owner since every camera and it's owner has it's own unique means of identifying itself from any other camera.

Friedman clearly shows all of the limitations recited in claim 30. See all of the paragraphs cited within the specification. Referring to claim 30, Friedman describes the method of claim 27 further comprising determining a geographic location of the digital camera when capturing the image and wherein the metadata comprises the geographic location of the camera when the image was captured (column 4, lines 66-67) and (column 5, lines 1-4).

Friedman clearly shows all of the limitations recited in claim 31. See all of the paragraphs cited within the specification. Referring to claim 31, Friedman describes the method of claim 26 further comprising displaying the image data when authenticated (column 4, lines 47-57).

Friedman clearly shows all of the limitations recited in claim 32. See figure 4 and all of the paragraphs cited within the specification. Referring to claim 32, Friedman describes the method of claim 26 wherein the image data and metadata is associated with audit data indicating changes to the image data. Specifically, Friedman describes an authentication system where a comparator receives the image hash from a hash calculator and a secure image hash from a decryptor. If the two are similar then that concludes that the digital image in question is identical to the image originally produced. If anything has been altered, then the authenticity will be indicated as not affirmed in the authenticity output signal A (column 6, lines 31-52) and (figure 3C). This audit data signal is viewable in the viewer module (figure 4).

Claim Rejections - 35 USC § 103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 103 that form the basis for rejections under this section made in this office action:

(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

5. Claim 28 is rejected under 35 U.S.C. 103(c) as being unpatentable over U.S. Patent No. 5,499,294 to Friedman in view of U.S. Publication No. 2002/0001395 A1 to Davis et al.

Regarding claim 28, Friedman describes the method of claim 27 but does not teach the method further comprising obtaining the date and time setting for the digital camera by a host system from a website controlled by at least one of the manufacturer and the distributor of the digital camera. Davis teaches a session mode wherein the camera operates under the control of parameters that govern that session (paragraph [0066], lines 2-4). In addition, Davis teaches that an external device may initiate that session (paragraph [0066], lines 6-8). An external device may in fact be a communications network, such as the Internet (figure 2, item 102). Davis also teaches that within the session parameters, the external device can instruct the camera to set the time and date (paragraph [0067], lines 3-6). Also, note that Davis teaches that either the user can initiate a session or an external device can (paragraph [0066], lines 6-8). A non-user external device that initiates instructions to the camera could in fact comprise either the distributor or the manufacturer, as they are not the camera user. Therefore, it would have been obvious to one familiar to the art to combine the method taught in Friedman with a website controlled from either the distributor or manufacturer to set the camera's time and date. One would have been motivated to modify Friedman to include a website controlled by either the manufacturer or the distributor to keep the photographer from altering the photographing record in that it would be false and misleading as stated in Davis (paragraph [0065]).

6. Claim 29 is rejected under 35 U.S.C. 103(c) as being unpatentable over U.S. Patent No. 5,499,294 to Friedman in view of U.S. Patent No. 6,587,949 to Steinberg.

Regarding claim 29, Friedman describes the method of claim 26 but does not teach the method further comprising updating the private key for the digital camera by the host system from a website controlled by at least one of the manufacturer and the distributor of the digital camera. Steinberg teaches the initial programming of a security key, or private key, which is done with the initial set-up of the device, prior to its normal use (column 6, lines 45-58). Therefore it would have been obvious to one familiar to the art to combine the method taught in Friedman with the programming

Art Unit: 2615

of a private key prior to using the device. One would have been motivated to modify the method of Friedman to include the programming (updating) of a private key in that with the user knowing the private key, they can then operate the computer to decrypt the encrypted data as stated in Steinberg (column 6, lines 58-60).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Gagliostro whose telephone number is 703-308-6070. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Gagliostro

11/15/2004


NGOC-YEN VU
PRIMARY EXAMINER